

Information Sheet

Supplementary Guidance: Safe Use of Crawler-Track MEWPs

Additional information to support the EWPA Good Practice Guide

Overview

Crawler-track MEWPs offer significant benefits to traditional wheeled MEWPs, especially when operating on soft or uneven ground. However, they can also introduce different risks especially during loading/unloading or when working on side slopes or near drop offs. This document provides guidance on the different operating characteristics and safety considerations of crawler-track MEWPs.

1. What Makes Crawler-Track MEWPs Different?

Key Features

- Tracks spread the machine's weight over a larger area, reducing ground pressure and improving traction.
- They provide better traction on mud, sand, snow, slopes and rough ground.
- Smaller turning circle due to Differential (skid-steer) Steering.
- Can reduce surface damage which is ideal for turf, paving and other sensitive surfaces. Note: turning on soft ground can still tear the surface.

Where are they best used?

- Soft, uneven, wet or load-sensitive ground.
- Rough terrain with poor traction.
- Narrow access or restricted work areas.
- Sloping or undulating ground.
- Sites where minimal ground disturbance is preferable.



2. Key Safety Considerations

Stability

- Crawler-track design can improve traction and flotation on suitable terrain, but it does not eliminate overturning or instability risks, particularly on side slopes, near edges, trenches, depressions, or changing ground conditions.
- Crawler-tracked scissor lifts are not typically fitted with conventional pothole-protection bars; stability is managed through manufacturer-specific controls, such as tilt/levelling systems and restrictions on elevated travel.
- When travelling over uneven ground or cresting a slope, the MEWP may 'pitch-over' (overbalance) when the tracks pivot on the edge, causing the platform to move suddenly upwards or downwards.

Ground Conditions

- Soft spots, voids and erosion can reduce ground support beneath the tracks, causing the MEWP to lean, sink or drop unexpectedly.
- Skid-steer turning can damage soft ground.
- Crawler-track MEWPs can still bog in very soft ground conditions.

3. Operating on Uneven or Soft Terrain

Do's:

- Follow manufacturer's instructions for safe use.
- Before operating a MEWP, conduct a full hazard and risk assessment to identify any soft or uneven ground, overhead power lines, sufficient lighting, traffic and public access.

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- Always plan the work task properly, including travel between work locations.
- Travel straight up/down slopes.
- Use extreme caution when approaching the crest of any rough-terrain obstacle. Check for kerbs, large holes, uneven ground, overhead hazards and other obstacles. When the tracks pivot over an edge, the MEWP may pitch or pivot suddenly, causing unexpected platform movement. Operate the controls slowly and smoothly to minimise acceleration during the pivoting movement.
- When driving a tracked boom lift, the boom should be positioned over the rear of the chassis (over final drive and sprockets). If you must drive with boom positioned over the front of the chassis, remember controls will move in opposite directions to the machine controls. Refer to drive direction decals to ensure correct travel direction is selected.
- Move controls slowly and smoothly. Avoid sudden or jerky movements.
- Always assess ground conditions prior to operating the MEWP and continue to check for changed conditions during use.
- Use suitable ground protection where required to reduce surface damage and distribute load. If the ground is too slippery, unstable or soft to safely support the MEWP, stop work and reassess the task.
- Avoid turning on slopes. If turning is unavoidable, turn only in an area free of obstacles, with the boom/platform fully lowered/retracted, using slow and controlled movements. Do not operate other functions while turning the MEWP.

Ground Pressure

Even though tracks help to 'spread the load', ground pressure beneath crawler-mounted machinery is not always evenly distributed. The highest loads occur at the front idler and rear drive sprocket, with reduced pressure through the centre rollers. Actual ground loading varies with slope, boom position, turning, and soil conditions. Refer Manufacturer's maximum ground-pressure values marked on the MEWP.

Don't's:

- Do not drive with the platform elevated or boom extended above horizontal unless the manufacturer specifically permits it.
- Don't drive on grades or across side slopes exceeding the manufacturer's specifications and limits.
- Don't drive the MEWP to manoeuvre the platform close to an obstruction. Instead, use the functional controls e.g. raise, lower, telescope, slew etc.
- Don't drive or operate close to edges, trenches or drop-offs. Avoid driving parallel to trenches.
- Don't assume crawler-track MEWPs eliminate all stability risks.

Fall Protection

All personnel in the platform (or basket) of a boom type MEWP must use a fall arrest system or restraint device which is secured by a lanyard to an approved anchor point provided for this purpose.

Note: Boom type MEWPs have the platform supported by a hinged member e.g. vertical mast boom with jib.

[VIEW POLICY ON THE USE OF FALL ARREST SYSTEMS](#)



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4. Compact Crawler Booms

Compact Crawler Booms (commonly referred to as Spider Lifts) are a specialised type of crawler-track MEWP that combine compact crawler travel with deployable outriggers for operation. Unlike many other crawler-track MEWPs that can operate when supported by the tracked chassis, spider booms rely on correct outrigger set-up, levelling and ground support before boom functions are used. This makes them well suited to confined access sites and sensitive or uneven surfaces. However, it also introduces additional safety-critical considerations, including operating the controls while walking alongside the MEWP, outrigger pad placement, ground bearing capacity, machine levelling, track width, travel configuration and manufacturer limits for slopes, side-slopes and loading/unloading.

- Where fitted, use the remote-control station only as described by the manufacturer. Maintain clear visibility of the machine, travel path, outriggers/stabilisers and platform/boom movement. Keep clear of tracks, outriggers and crush zones, and do not stand between the MEWP and fixed structures. When travelling across slopes, avoid standing on the low side of the MEWP.
 - Where the MEWP is fitted with extendable or variable-width tracks, extend the tracks to the manufacturer's specified position for travel, loading/unloading, and set-up. Tracks should only be retracted where required for restricted access or transport and if permitted by the manufacturer.
 - Ensure the machine is levelled per manufacturer's specification limits and the tracks are raised off the ground before operating boom functions.
 - Where permitted by the manufacturer; when driving on side slopes, ensure the boom is stowed and if space allows, extend the low-side outriggers until they are close to the ground to help prevent a tip-over if the surface changes. Use caution when lowering the stabilisers on one side of the machine only, as this can affect stability as they extend out from the machine.
- Do not drive on side slopes exceeding manufacturer's specification limits.



- Be certain that outriggers are set-up and levelled according to the manufacturer's instructions and the pads are set on a firm and horizontal surface capable of supporting the pressure applied by the MEWP.
- Do not set the outrigger pads on inclined, vertical, or slippery surfaces. Continue to check that the pads have not moved off the supporting surface during operation. [VIEW MEWPs WITH OUTRIGGERS ON INCLINES DOCUMENT](#)

5. Loading and Unloading — High-Risk Task

Before Loading/Unloading

- Check loading ramps are rated to meet or exceed the mass of the MEWP and are secured and clean.
- Check ramp angle does not exceed manufacturer's specification limits.
- Before transporting a crawler-track MEWP, inspect the tracks for damage, loose mud/debris and check they are tensioned to the manufacturer's specification. Damaged or incorrect track tension can cause derailment during loading or unloading and reduce stability on ramps.
- Whenever possible, use a spotter to help guide the MEWP on or off the transport vehicle. The MEWP operator and the spotter should remain in constant communication throughout the loading/unloading process.

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During Loading/Unloading

- Always keep the boom/platform as low as possible.
- Align the tracks straight with ramps. Avoid steering the MEWP when on the ramps or truck tray.
- Drive and operate functions slowly. Avoid sudden or excessive movement of the controls.

At the Pitch-Over (Tipping) Point

Loading/unloading incidents are more likely to occur when the machine transitions from ramp to deck (or vice versa) and the weight of the MEWP shifts from one supporting surface to the other.

To minimise risk:

- Operate in 'creep speed' prior to transition.
- Keep the MEWP straight to the ramp and tray and do not try to steer when the MEWP transitions.
- Maintain smooth, steady movement.
- Do not stop the controls abruptly mid-transition.
- Expect a slight lurch and hold on. Try to avoid jerking on the controls during transition.

After Loading/Unloading

- Lower the machine to the manufacturer's 'stowed position'.
- Secure using approved tie-down points and a suitable load-restraint system before transport.

Pitch-Over

Pitch-over is the tipping point where a crawler-mounted machine rotates forward or backward when ground support is lost at the front or rear of the tracks and the centre of gravity moves beyond the remaining support point. It can occur when travelling forward or reverse over a crest, drop-off, ramp transition, or sudden change in ground level.



6. Key Takeaways

- Crawler-track MEWPs are ideal for soft, uneven or sensitive terrain.
- They offer better traction and flotation but have different stability risks.
- Always conduct a site-specific risk assessment prior to operating the MEWP. Confirm the supporting surface e.g. ground, can support the point load pressure and ground bearing pressure of the MEWP and continue to check for changed conditions during use.
- The pitch-over (tipping) point during loading/unloading is a critical hazard. Always move controls slowly and smoothly. Avoid sudden or jerky movements.
- All personnel in the platform (or basket) of a boom-type MEWP must use a fall arrest system or restraint device which is secured by a lanyard to an approved anchor point provided for this purpose.
- Always follow the manufacturer's instructions and never exceed their specification limits.